

Application No: 10/827,531
Response to Office Action dated October 12, 2006

IN THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-38. (Canceled).

Claim 39. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~which~~ wherein the composite compound is in the form of an aqueous composition.

Claim 40. (Withdrawn – Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~which~~ wherein the composite compound is in the form of a non-aqueous composition.

Claim 41. (Withdrawn – Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~which~~ wherein the composite compound is in the form of a dry compound.

Claim 42. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, wherein the binding agent is an organic compound.

Claim 43. (Canceled).

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Claim 44. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, wherein the binding agent is selected from the group consisting of acrylic polymers, vinyl polymers, their copolymers, their polycondensates, or the polyaddition products, in their free acid state or partially neutralized, or totally neutralized, of at least one of the monomers acrylic acid, methacrylic acid, itaconic, crotonic, fumaric acid, maleic anhydride, isocrotonic acid, aconitic acid, mesaconic acid, sinapic acid, undecylenic acid, angelic acid, their respective esters, acrylamido methyl propane sulphonic acid, acrolein, acrylamide and/or methacrylamide, methacrylamido propyltrimethyl ammonium chloride or sulphate, methacrylate of trimethylammonium ethyl chloride or sulphate, their acrylate and acrylamide counterparts, quaternized or not, dimethyldiallylammonium chloride and vinylpyrrolidone, or a binding agent selected from group consisting of the linear or branched fatty acids, the linear or branched fatty alcohols, the linear or branched or cyclic fatty amines, saturated or unsaturated, or a binding agent selected from the group consisting of the linear or branched fatty chain quaternary ammonium salts.

Claim 45. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, wherein the binding agent is selected from the group consisting of acrylic or vinyl polymers and/or copolymers in their free acid state or partially neutralised, or totally neutralised, obtained by polymerization, in the acid state in the presence of at least one of the mineral or organic particles of the composite compound ~~and optionally in the presence of the binding agent as claimed in claim 44.~~

Claims 46-47. (Canceled).

Claim 48. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~which~~ wherein the composite compound contains 0.1 % to 99.0 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 99.9 % to 0.1 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 49. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~which~~ wherein the composite compound contains 0.01 % to 10.0 % dry weight of the binding agent relative to the total dry weight of the fillers or pigments.

Claim 50. (Canceled).

Claim 51. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, ~~whose~~ wherein the yield stress of the composite compound is higher than that of the standard mixture of corresponding fillers or pigments.

Claims 52-54. (Canceled).

Claim 55. (Currently Amended): The paper coating color as claimed in claim 86, wherein the composite compound is in the form of an [[An]] aqueous suspension of mineral

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~~or organic fillers or pigments, which comprises a composite compound as claimed in claim 38.~~

Claim 56. (Currently Amended): The paper coating color aqueous suspension of ~~mineral or organic fillers or pigments~~ as claimed in claim 55, ~~which~~ wherein the aqueous suspension is macroscopically homogeneous.

Claim 57. (Currently Amended): The paper coating color aqueous suspension of ~~mineral or organic fillers or pigments~~ as claimed in claim 55, ~~whose~~ wherein the yield stress of the aqueous suspension is higher than that of the standard mixture of fillers or pigments.

Claim 58-59. (Canceled).

Claim 60. (Currently Amended): The paper coating color as claimed in claim ~~[[58]]~~ 86, whose yield stress is higher than the standard mixture of fillers or pigments.

Claim 61. (Currently Amended): The paper coating color as claimed in claim ~~[[58]]~~ 86, which has a higher light scattering coefficient S than that of a coating color containing the standard suspensions of the corresponding mixtures.

Claims 62-65. (Canceled).

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Claim 66. (Withdrawn – Currently Amended): A paper surface-treatment compound or an aqueous paint or a non-aqueous composition which contains a ~~composite compound~~ paper coating color as claimed in claim ~~[[38]]~~ 86.

Claim 67. (Canceled).

Claim 68. (Withdrawn): The paper surface-treatment compound as claimed in claim 66, whose yield stress is higher than that of the standard corresponding mixture of fillers or pigments.

Claim 69. (Withdrawn – Currently Amended): The paper surface-treatment compound ~~The aqueous or non-aqueous paint composition~~ as claimed in claim 66, which has a higher light scattering coefficient S than that of a paint composition containing the standard suspensions of the corresponding mixtures.

Claim 70. (Withdrawn): The paper surface-treatment compound as claimed in claim 66, whose curve, determined in accordance with the ISIT printability test and representative of the tack force as a function of time, has smaller rising and falling gradients than coating colors containing the standard suspensions of the corresponding mixtures and a higher maximum value in terms of tack force.

Claim 71. (Currently Amended): An uncoated filling composition which contains a ~~composite compound~~ paper coating color as claimed in claim ~~[[38]]~~ 86.

Claims 72-74. (Canceled).

Claim 75. (Currently Amended): The paper coating color composite compound as claimed in claim 48, ~~which~~ wherein the composite compound contains 25 % to 95.0 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 75 % to 5 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 76. (Currently Amended): The paper coating color composite compound as claimed in claim 49, ~~which~~ wherein the composite compound contains 25 % to 95 % dry weight of the binding agent relative to the total dry weight of the fillers or pigments.

Claim 77. (Currently Amended): The paper coating color composite compound as claimed in claim 51, whose yield stress is at least four times higher than that of the standard mixture of corresponding fillers or pigments.

Claim 78-79. (Canceled).

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Claim 80. (Withdrawn): The paper surface-treatment compound as claimed in claim 66, whose yield stress is at least four times higher than that of the standard corresponding mixture of fillers or pigments.

Claims 81-82. (Canceled).

Claim 83. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, wherein said mineral or organic filler or pigment having a surface with at least one hydrophilic site [[and]] is selected from the group consisting of a natural form of calcium carbonate, dolomites, crystalline or amorphous aluminum hydroxides, natural or precipitated silicates, calcium sulfate, titanium dioxide, satin white, a wollastonite, huntite, and calcined clays.

Claim 84. (Currently Amended): The paper coating color composite compound as claimed in claim [[38]] 86, wherein said mineral or organic filler or pigment having at least has at least one organophilic site is selected from the group consisting of clays, calcined clays, mica, zinc oxide, phthalocyanine blue, polystyrene-based synthetic pigments, urea-formaldehyde resins, carbon black, fibers and flour of cellulose and hydrophilic mineral or organic particles having at least one organophilic site.

Claim 85. (Previously Presented): A paper coating color which comprises a composite compound of mineral or organic fillers or pigments, which comprises:

a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site, co-structured or co-adsorbed by being blended with

b) at least one binding agent for the binding of a combination of mineral or organic fillers or pigments to each other, the paper coating color having a higher whiteness, determined in accordance with the TAPPI T452 ISO 2470 standard, than that of a coating color containing standard suspensions of the corresponding mixtures.

Claim 86. (Previously Presented): A paper coating color which comprises a composite compound of mineral or organic fillers or pigments, which comprises:

a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site, co-structured or co-adsorbed by being blended with

b) at least one binding agent for the binding of said combination of mineral or organic fillers or pigments to each other, the paper coating color having a higher brightness, TAPPI 75°, than that of a coating color containing the standard suspensions of corresponding mixtures.

Claim 87. (Previously Presented): A paper coating color which comprises a composite compound of mineral or organic fillers or pigments, which comprises:

a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site, co-structured or co-adsorbed by being blended with

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b) at least one binding agent for binding of said combination of mineral or organic fillers or pigments to each other, the paper coating color exhibiting a curve, determined in accordance with the ISIT printability test and representative of the tack force as a function of time, that has smaller rising and falling gradients than coating colors containing the standard suspensions of the corresponding mixtures and a higher maximum value in terms of tack force.

Claim 88. (Previously Presented): A paper coating color which comprises a composite compound of mineral or organic fillers or pigments, which comprises:

a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site, co-structured or co-adsorbed by being blended with

b) at least one binding agent for binding of said combination of mineral or organic fillers or pigments to each other, the paper coating color having a higher print density than that of a coating color containing the standard suspensions of the corresponding mixtures.

Claim 89. (New): The paper coating color as claimed in claim 88, wherein the composite compound is in the form of an aqueous composition.

Claim 90. (New): The paper coating color as claimed in claim 88, wherein the composite compound is in the form of a non-aqueous composition.

Claim 91. (New): The paper coating color as claimed in claim 88, wherein the composite compound is in the form of a dry compound.

Claim 92. (New): The paper coating color as claimed in claim 88, wherein the binding agent is an organic compound.

Claim 93. (New): The paper coating color as claimed in claim 88, wherein the binding agent is selected from the group consisting of acrylic polymers, vinyl polymers, their copolymers, their polycondensates, or the polyaddition products, in their free acid state or partially neutralized, or totally neutralized, of at least one of the monomers acrylic acid, methacrylic acid, itaconic, crotonic, fumaric acid, maleic anhydride, isocrotonic acid, aconitic acid, mesaconic acid, sinapic acid, undecylenic acid, angelic acid, their respective esters, acrylamido methyl propane sulphonic acid, acrolein, acrylamide and/or methacrylamide, methacrylamido propyltrimethyl ammonium chloride or sulphate, methacrylate of trimethylammonium ethyl chloride or sulphate, their acrylate and acrylamide counterparts, quaternized or not, dimethyldiallylammonium chloride and vinylpyrrolidone, or a binding agent selected from group consisting of the linear or branched fatty acids, the linear or branched fatty alcohols, the linear or branched or cyclic fatty amines, saturated or unsaturated, or a binding agent selected from the group consisting of the linear or branched fatty chain quaternary ammonium salts.

Claim 94. (New): The paper coating color as claimed in claim 88, wherein the binding agent is selected from the group consisting of acrylic or vinyl polymers and/or

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copolymers in their free acid state or partially neutralised, or totally neutralised, obtained by polymerization, in the acid state in the presence of at least one of the mineral or organic particles of the composite compound.

Claim 95. (New): The paper coating color as claimed in claim 88, wherein the composite compound contains 0.1 % to 99.0 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 99.9 % to 0.1 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 96. (New): The paper coating color as claimed in claim 88, wherein the composite compound contains 0.01 % to 10.0 % dry weight of the binding agent relative to the total dry weight of the fillers or pigments.

Claim 97. (New): The paper coating color as claimed in claim 88, wherein the yield stress of the composite compound is higher than that of the standard mixture of corresponding fillers or pigments.

Claim 98. (New): The paper coating color as claimed in claim 88, wherein the composite compound is in the form of an aqueous suspension.

Claim 99. (New): The paper coating color as claimed in claim 98, wherein the aqueous suspension is macroscopically homogeneous.

Claim 100. (New): The paper coating color as claimed in claim 98, wherein the yield stress of the aqueous suspension is higher than that of the standard mixture of fillers or pigments.

Claim 101. (New): The paper coating color as claimed in claim 88, whose yield stress is higher than the standard mixture of fillers or pigments.

Claim 102. (New): The paper coating color as claimed in claim 88, which has a higher light scattering coefficient S than that of a coating color containing the standard suspensions of the corresponding mixtures.

Claim 103. (New): A paper surface-treatment compound or an aqueous paint or a non-aqueous composition which contains a paper coating color as claimed in claim 88.

Claim 104. (New): The paper surface-treatment compound as claimed in claim 103, whose yield stress is higher than that of the standard corresponding mixture of fillers or pigments.

Claim 105. (New): The paper surface-treatment compound as claimed in claim 103, which has a higher light scattering coefficient S than that of a paint composition containing the standard suspensions of the corresponding mixtures.

Claim 106. (New): The paper surface-treatment compound as claimed in claim 103, whose curve, determined in accordance with the ISIT printability test and representative of the tack force as a function of time, has smaller rising and falling gradients than coating colors containing the standard suspensions of the corresponding mixtures and a higher maximum value in terms of tack force.

Claim 107. (New): An uncoated filling composition which contains a paper coating color as claimed in claim 88.

Claim 108. (New): The paper coating color as claimed in claim 95, wherein the composite compound contains 25 % to 95.0 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 75 % to 5 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 109. (New): The paper coating color as claimed in claim 96, wherein the composite compound contains 25 % to 95 % dry weight of the binding agent relative to the total dry weight of the fillers or pigments.

Claim 110. (New): The paper coating color as claimed in claim 97, whose yield stress is at least four times higher than that of the standard mixture of corresponding fillers or pigments.

Claim 111. (New): The paper surface-treatment compound as claimed in claim 103, whose yield stress is at least four times higher than that of the standard corresponding mixture of fillers or pigments.

Claim 112. (New): The paper coating color as claimed in claim 88, wherein said mineral or organic filler or pigment having a surface with at least one hydrophilic site is selected from the group consisting of a natural form of calcium carbonate, dolomites, crystalline or amorphous aluminum hydroxides, natural or precipitated silicates, calcium sulfate, titanium dioxide, satin white, a wollastonite, huntite, and calcined clays.

Claim 113. (New): The paper coating color as claimed in claim 88, wherein said mineral or organic filler or pigment having at least has at least one organophilic site is selected from the group consisting of clays, calcined clays, mica, zinc oxide, phthalocyanine blue, polystyrene-based synthetic pigments, urea-formaldehyde resins, carbon black, fibers and flour of cellulose and hydrophilic mineral or organic particles having at least one organophilic site.